

## HOCKANUM RIVER AND CHARTERS BROOK SUB-REGIONAL BASIN TOTAL MAXIMUM DAILY LOAD (TMDL) SUMMARY

A Total Maximum Daily Load (TMDL) analysis was completed for indicator bacteria in the Hockanum River and Charters Brook Sub-Regional Basins. Waterbodies included in the TMDL analysis are the Hockanum River and Charters Brook. These waterbodies were included on the *CT Impaired Waters List* due to exceedences of the indicator bacteria criteria contained within the State *Water Quality Standards*.

### TMDL Overview

$$\text{TMDL} = \text{Point Sources} + \text{Nonpoint Sources} + \text{Background} + \text{Margin of Safety}$$

- A requirement under section 303(d) of the Federal Clean Water Act
- A management tool used to restore impaired waters by establishing the maximum amount of a pollutant that a waterbody can receive without adverse impacts to fish, wildlife, recreation, or other public uses
- Developed for waterbodies listed on the CT Impaired Waters List
- Provides guidance for responsible parties to use as a framework for developing a TMDL implementation plan

This TMDL was drafted using data collected by the CT DEP and the CT DEP *Cumulative Frequency Distribution Function Method*, which expresses the TMDL as an average percent reduction from the current condition required to achieve consistency with the State recreational water quality criteria. Potential sources of indicator bacteria include point and nonpoint sources, such as stormwater runoff, pet waste (dogs), natural sources (wildlife), agriculture, and illicit discharges. This fact sheet includes a summary table of TMDL percent reductions and a land use map, including the reductions, pulled directly from the complete TMDL document.

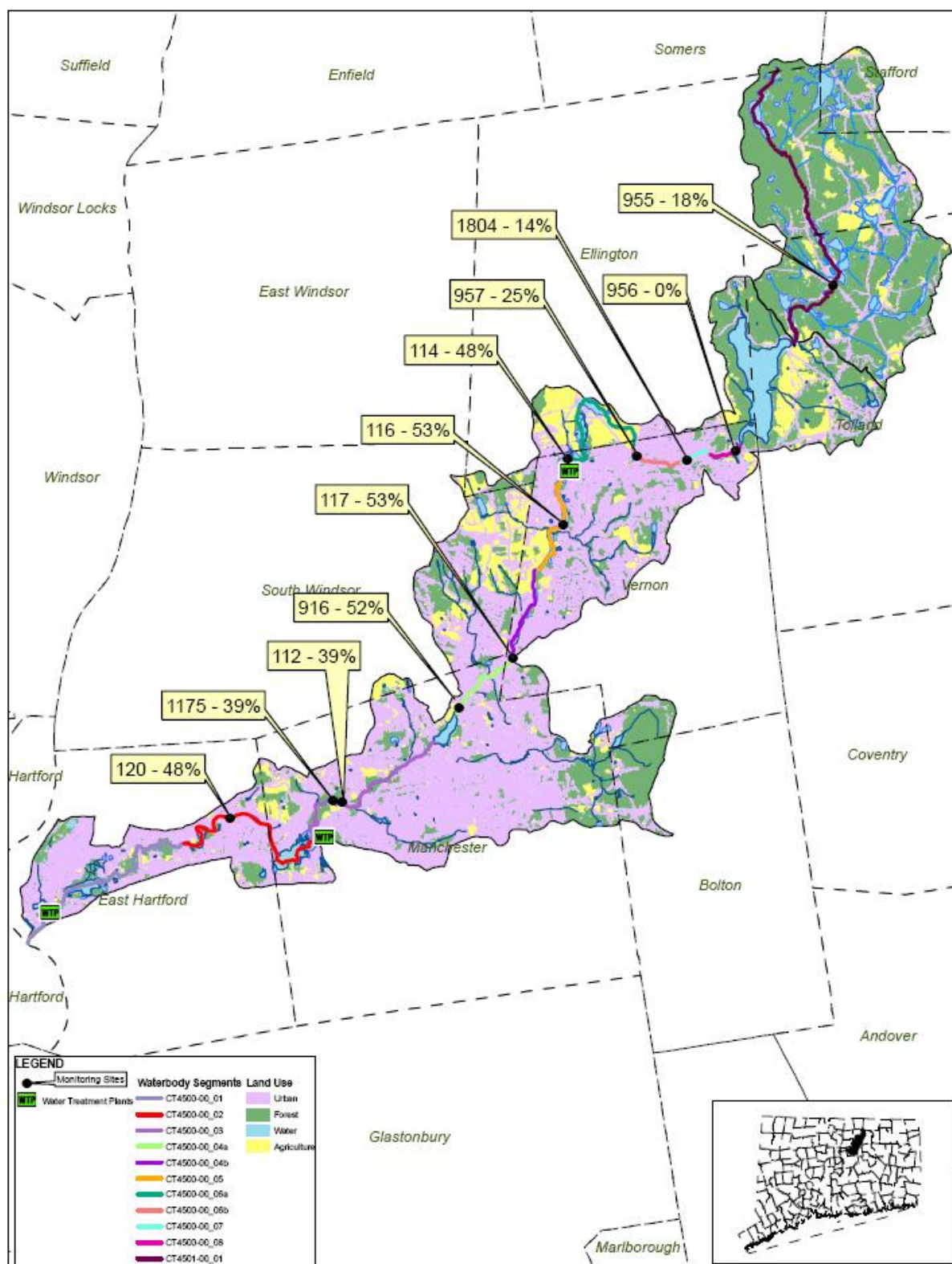
The percent reductions established in this TMDL can be achieved by implementing control actions where technically and economically feasible that are designed to reduce indicator bacteria loading from nonpoint sources and point sources. These actions may be taken by State and Local government, academia, volunteer citizens groups, and individuals to promote effective watershed management.

It is important to note that the TMDLs are effective for the entire watershed because they are a measurement of compounded impacts at a single point. As such, corrective actions must be undertaken at the source(s) whether it is a tributary or illicit discharge pipe, in order to achieve the required percent reductions. The approach to TMDL Implementation is anticipated to be on a watershed wide scale, which will require that all sources within the regional basin that are contributing to the in-stream impairment be addressed. The DEP supports an adaptive and iterative management approach where reasonable controls are implemented and water quality is monitored in order to evaluate for achievement of the TMDL goals and modification of controls as necessary. Local watershed groups are encouraged to continue their efforts by working with municipalities to formulate a TMDL implementation plan. An implementation plan formulated at the local level will most efficiently make use of local resources by assigning tasks to responsible parties and should serve as an agreed roadmap to reducing bacteria levels in the Basin.

A copy of the entire Hockanum River and Charters Brook TMDL can be found on the CT DEP website at <http://www.ct.gov/dep/tmdl>.

Table 1. Summary of TMDL analysis.

| Waterbody      | Waterbody Segment Description  | Segment ID    | Monitoring Site | Average Percent Reduction to Meet Water Quality Standards |     |      |          |
|----------------|--|---------------|-----------------|---|-----|------|----------|
|                |  |               |                 | TMDL  | WLA | LA   | MOS      |
| Charters Brook | From mouth at Shenipsit Lake Tolland US to headwaters near Webster Rd Ellington                          | CT4501-00_01  | 955             | 18  | 20  | 17   | Implicit |
| Hockanum River | From mouth at Connecticut River, East Hartford, upstream through headwaters at Shenipsit Lake outlet dam | CT4500-00_01  | 6160            | 48  | 54  | 43   | Implicit |
|                |  | CT4500-00_02  | 120             | 48  | 54  | 43   | Implicit |
|                |  | CT4500-00_03  | 112             | 39  | 48  | 37.5 | Implicit |
|                |  |               | 1175            |   |     |      |          |
|                |  | CT4500-00_04a | 916             | 52  | 54  | 52   | Implicit |
|                |  | CT4500-00_04b | 117             | 53  | 50  | 56   | Implicit |
|                |  | CT4500-00_05  | 116             | 53  | 50  | 54   | Implicit |
|                |  | CT4500-00_06a | 114             | 48  | 52  | 45   | Implicit |
|                |  | CT4500-00_06b | 957             | 25  | 40  | 14   | Implicit |
|                |  | CT4500-00_07  | 1804            | 14  | 28  | 4    | Implicit |
|                |  | CT4500-00_08  | 956             | 0   | 0   | 0    | Implicit |



**Figure 3: Hockanum and Charters Brook Land Use and TMDL % Reductions Map**



Map Data: CTDEP  
Map Created: May 2010